FIG. 1

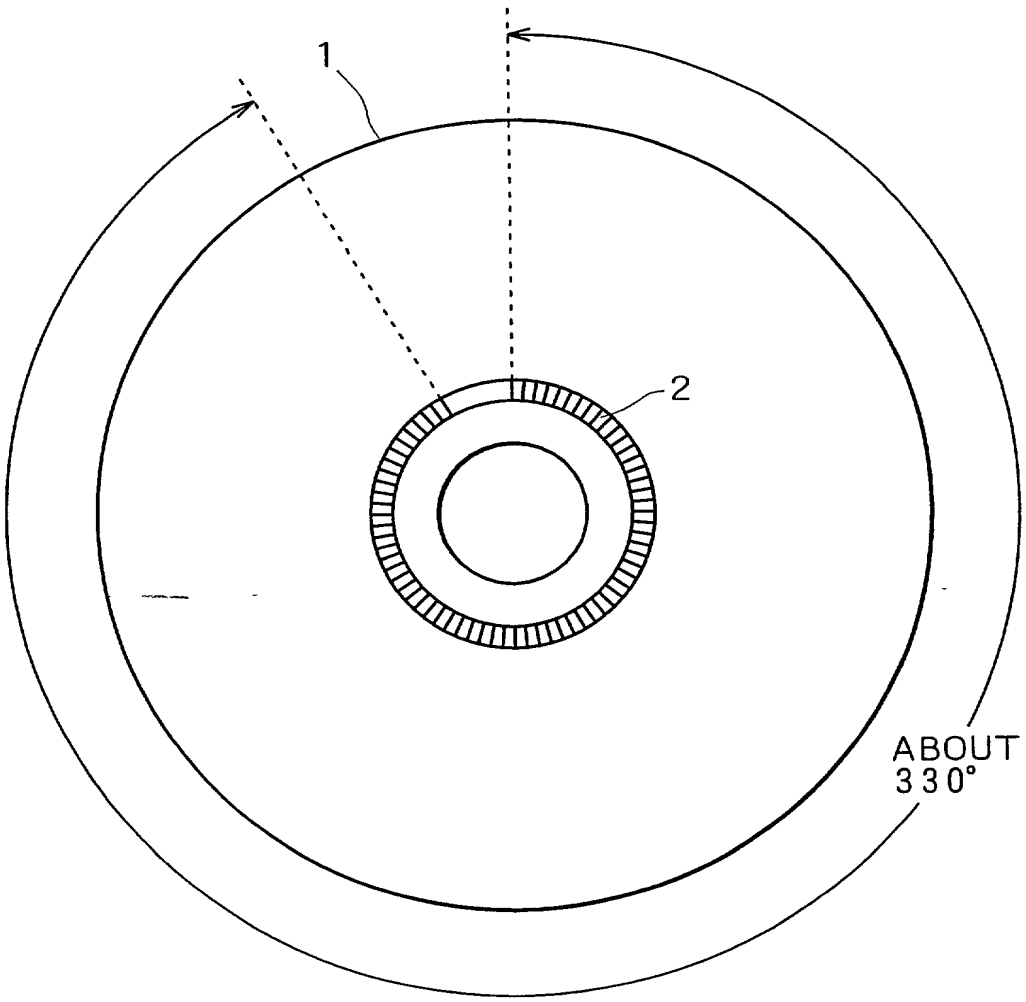


FIG. 2

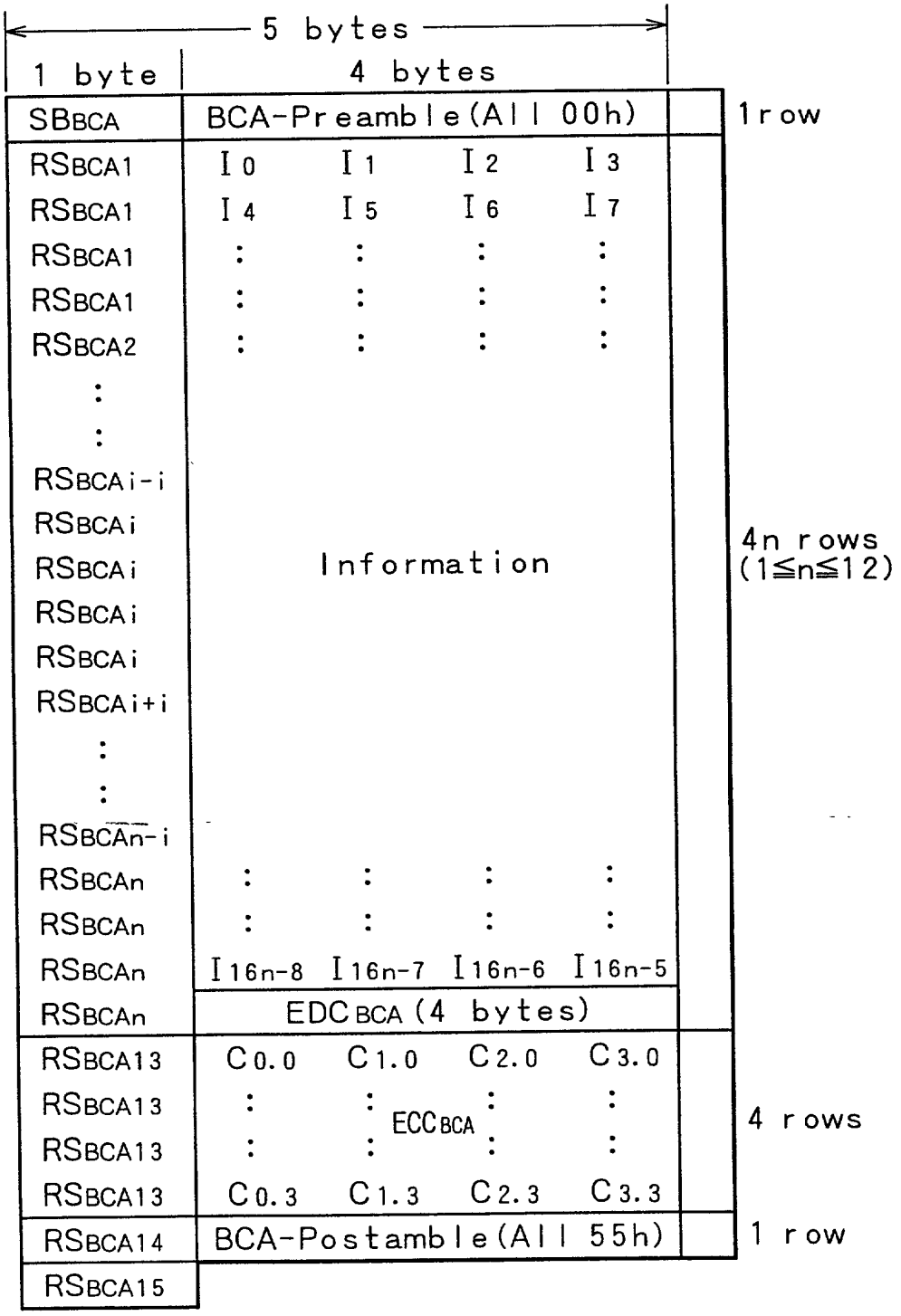

5 bytes
1 byte
4 bytes
SBBCA
BCA-Preamble(All 00h)
1row
RSBCA1
I0 I1 I2 I3
RSBCA1
I4 I5 I6 I7
RSBCA1
RSBCA1
RSBCA2
RSBCAi-i
RSBCAi
RSBCAi
RSBCAi
RSBCAi
RSBCAi+i
RSBCAn-i
RSBCAn
RSBCAn
RSBCAn
I16n-8 I16n-7 I16n-6 I16n-5
RSBCAn
EDCBCA(4 bytes)
Information
4n rows
(1≦n≦12)
RSBCA13
C0.0 C1.0 C2.0 C3.0
RSBCA13
RSBCA13
RSBCA13
C0.3 C1.3 C2.3 C3.3
ECCBCA
4 rows
RSBCA14
BCA-Postamble(All 55h)
1 row
RSBCA15

FIG. 3

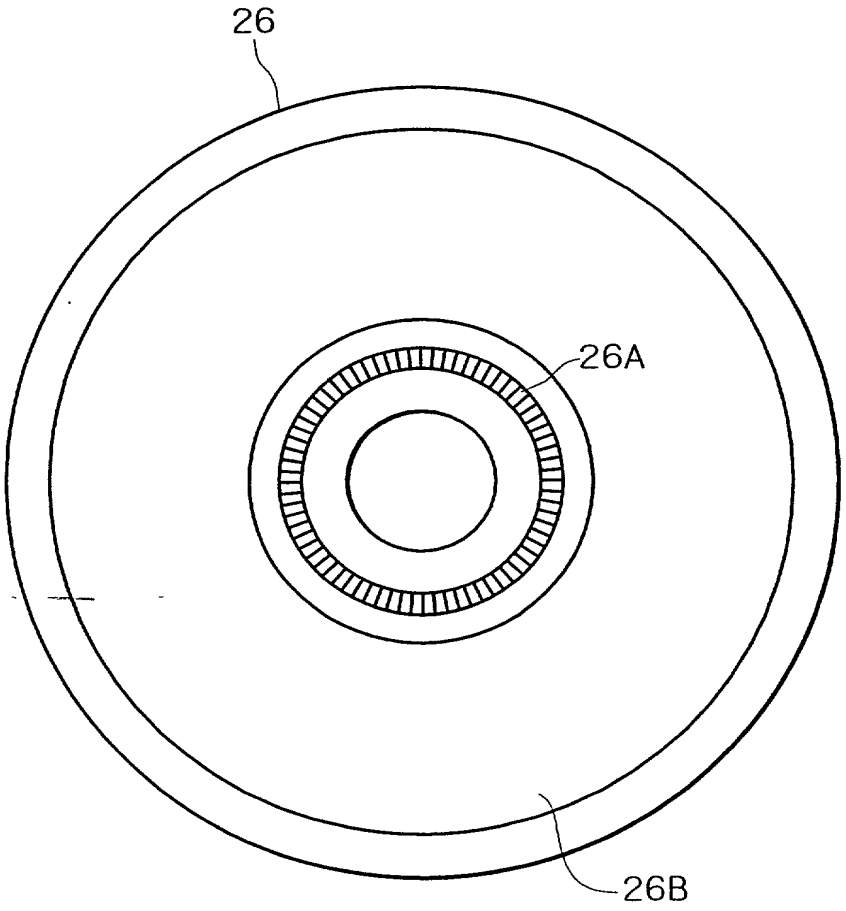
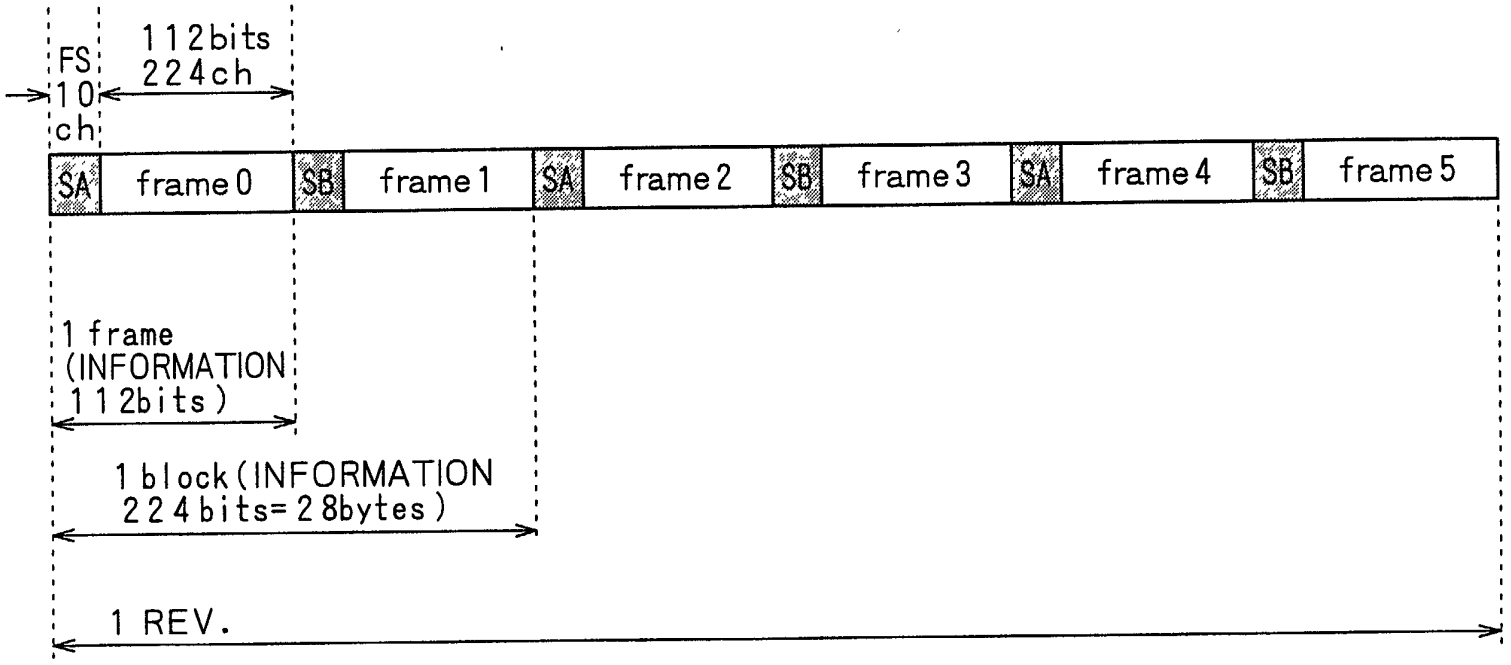
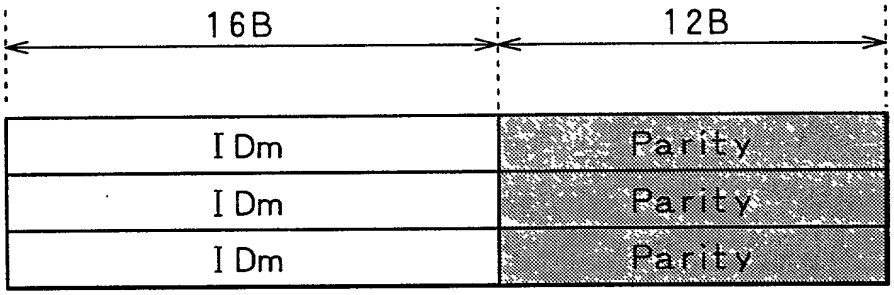


FIG. 4



n=3blocks
m=2frames
k=234channel bits =10(Frame Sync)+224(Information)

FIG.5



$GF(2^8)$
RS(32, 16, 13)×3

FIG.6

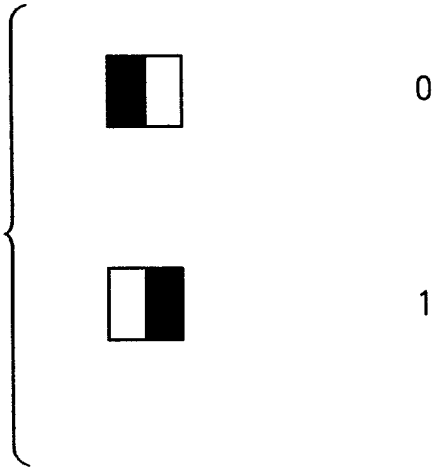


FIG. 7A

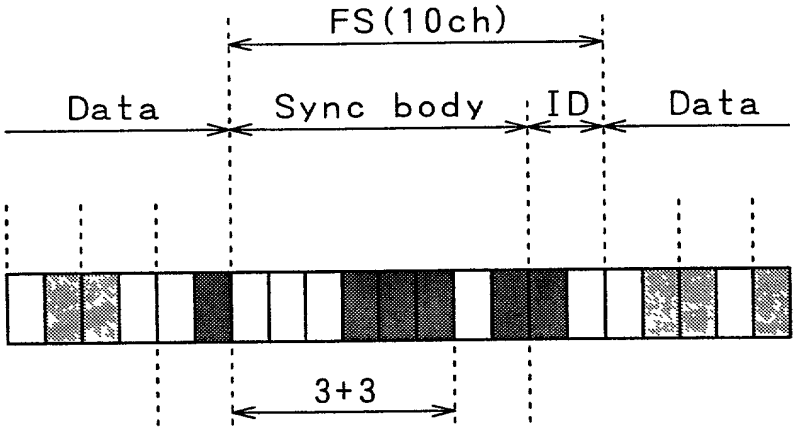


FIG. 7B

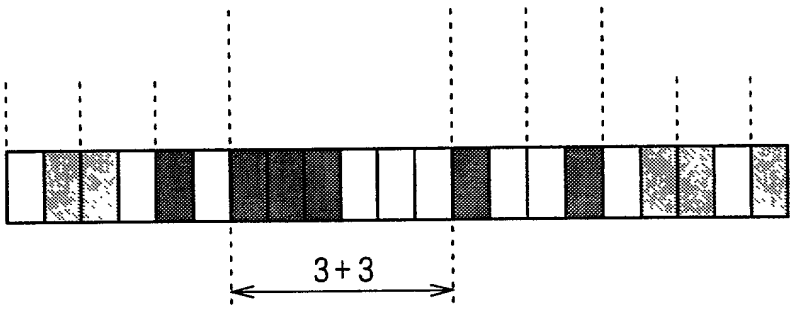


FIG. 8

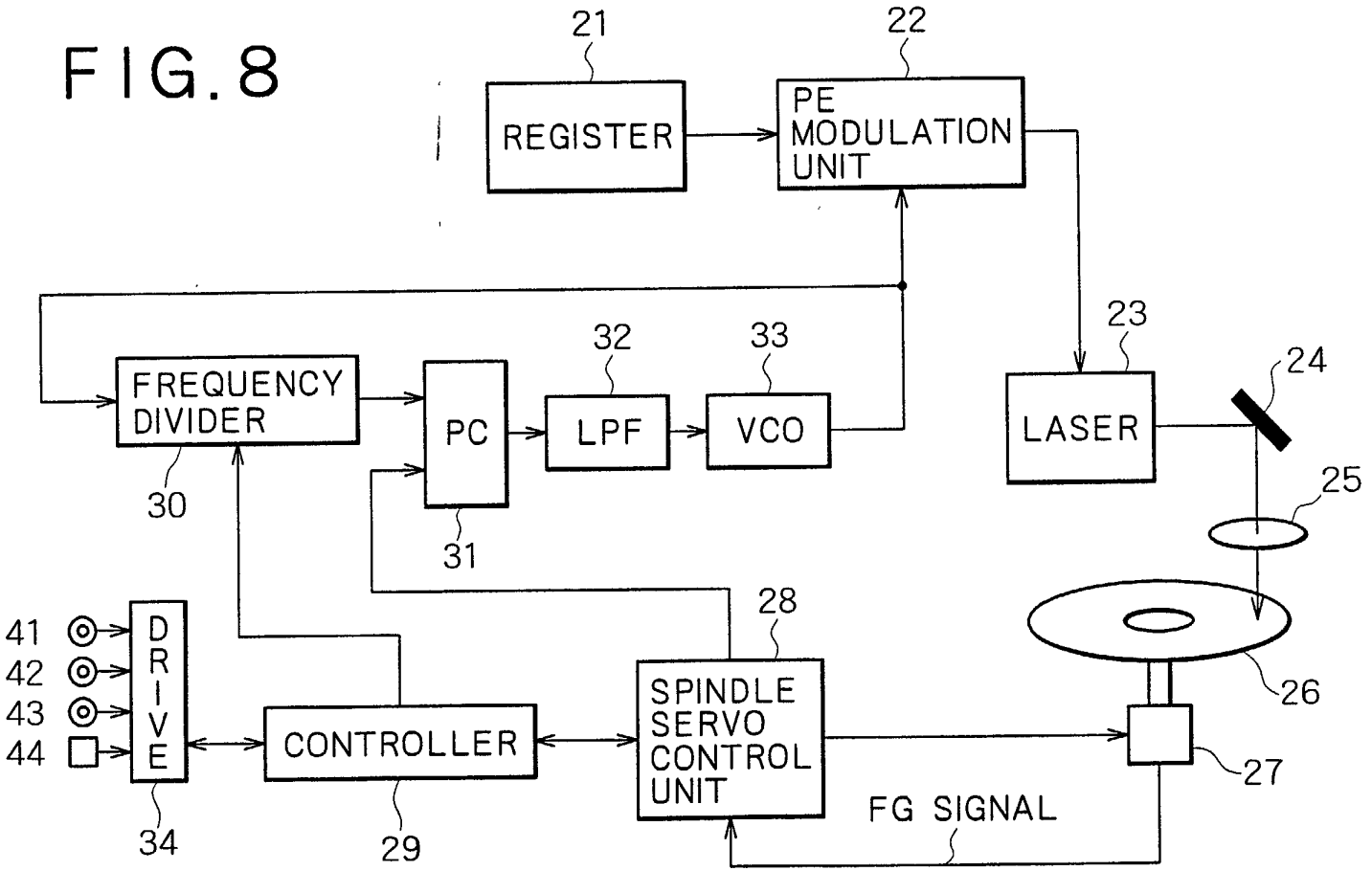

21
22
REGISTER
PE MODULATION UNIT
23
24
32
33
FREQUENCY DIVIDER
PC
LPF
VCO
LASER
25
30
31
28
41
42
43
44
DRIVE
CONTROLLER
SPINDLE SERVO CONTROL UNIT
26
27
FG SIGNAL
34
29

FIG. 9

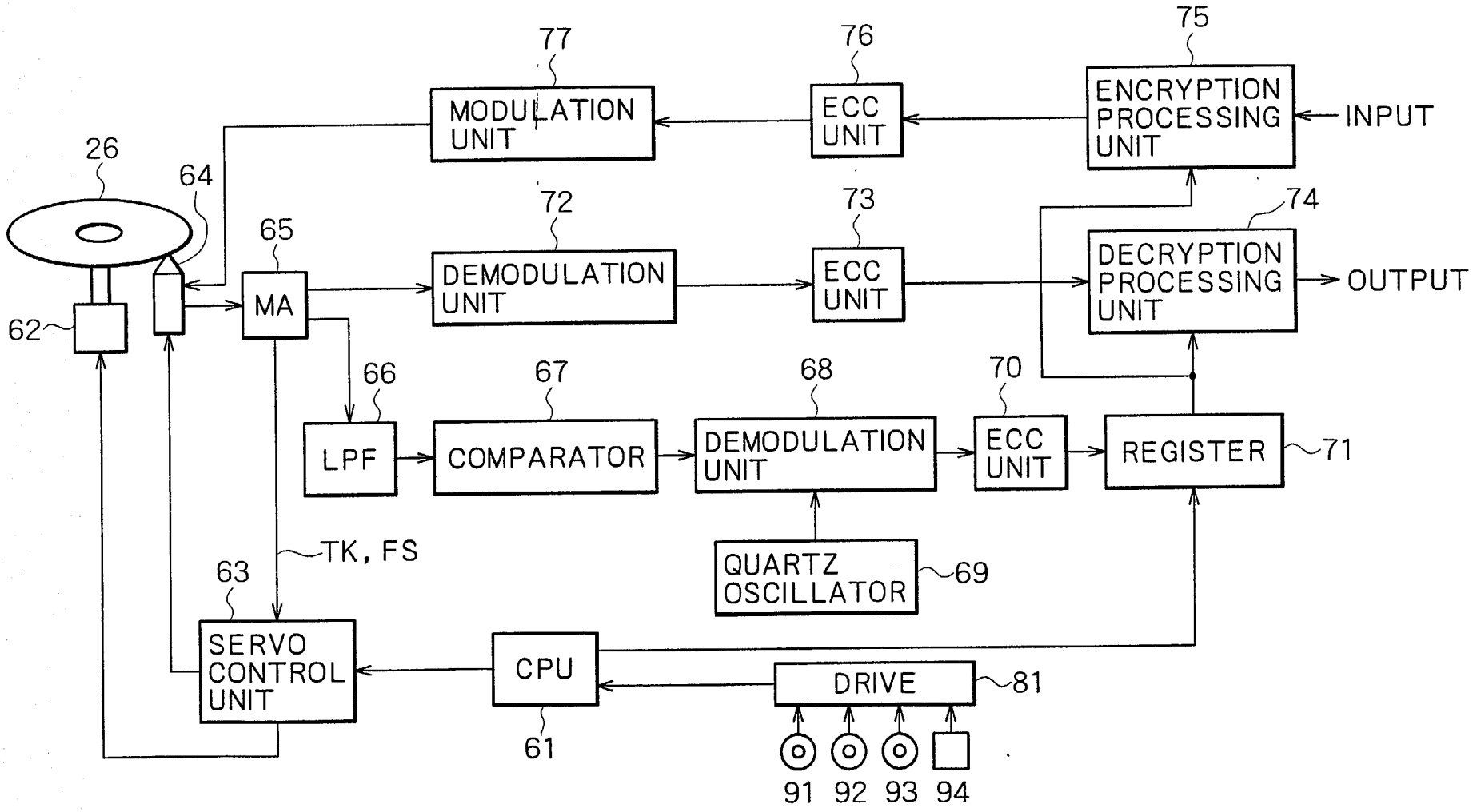

77
MODULATION UNIT
76
ECC UNIT
75
ENCRYPTION PROCESSING UNIT
INPUT
26
64
72
73
74
65
DEMODULATION UNIT
ECC UNIT
DECRYPTION PROCESSING UNIT
OUTPUT
62
MA
66
67
68
70
LPF
COMPARATOR
DEMODULATION UNIT
ECC UNIT
REGISTER
71
TK, FS
63
QUARTZ OSCILLATOR
69
SERVO CONTROL UNIT
CPU
DRIVE
81
61
91
92
93
94
51

FIG.10A

FIG.10B

FIG.10C

FIG.10D

FIG.10E

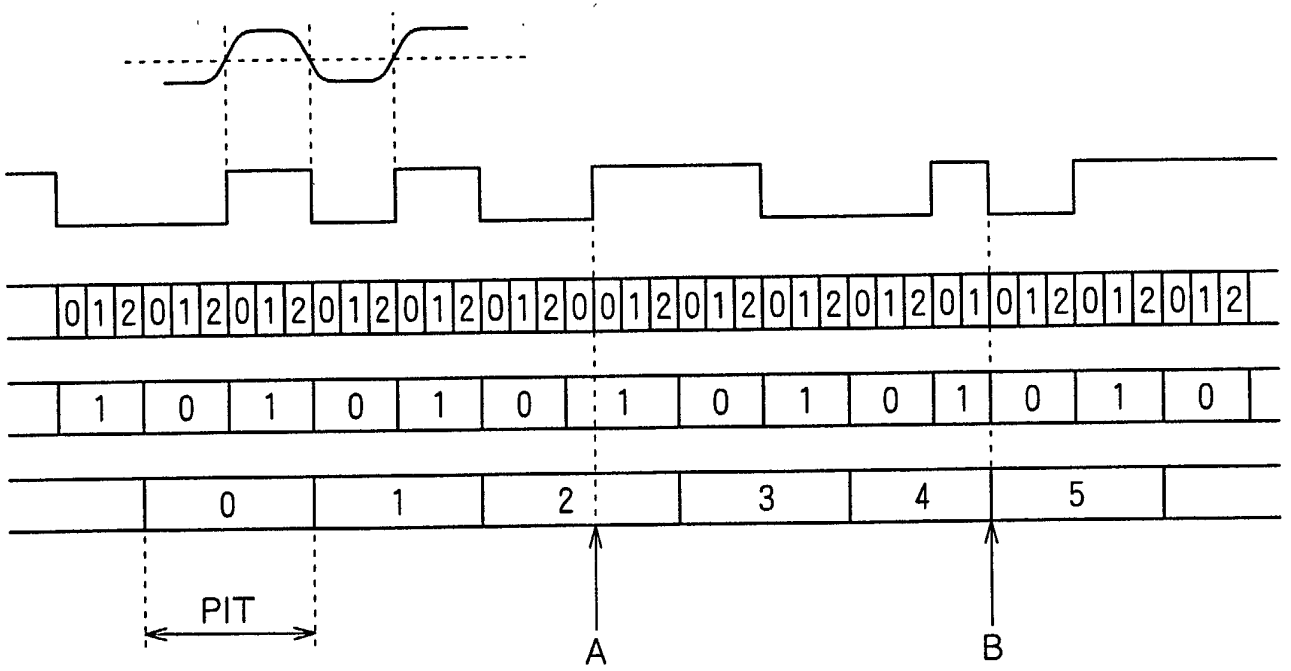


FIG. 11

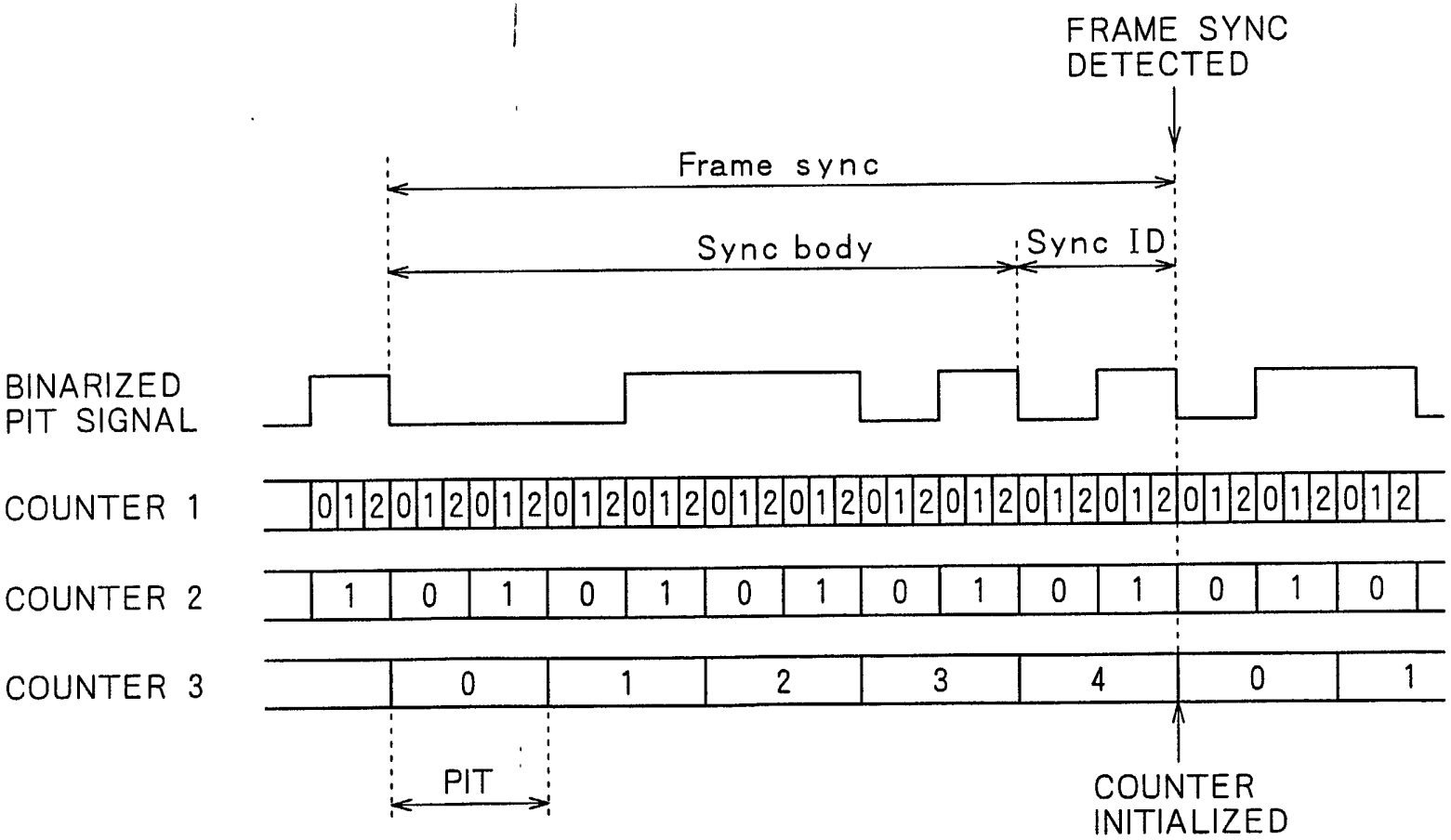
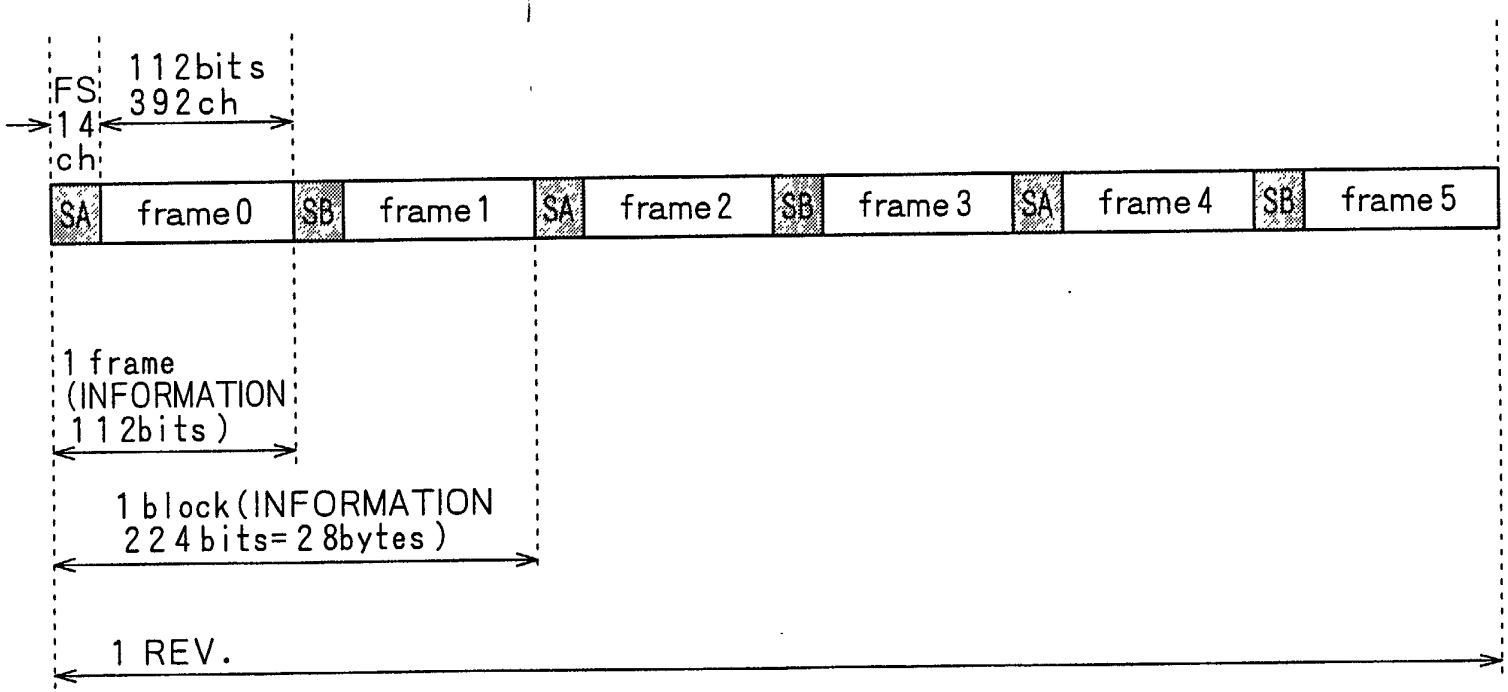

FRAME SYNC DETECTED
Frame sync
Sync body
Sync ID
BINARIZED PIT SIGNAL
COUNTER 1
0 1 2 0 1 2 0 1 2 0 1 2 0 1 2 0 1 2 0 1 2 0 1 2 0 1 2 0 1 2 0 1 2 0 1 2 0 1 2
COUNTER 2
1 0 1 0 1 0 1 0 1 0 1 0 1 0 1 0
COUNTER 3
0 1 2 3 4 0 1
PIT
COUNTER INITIALIZED

FIG. 12



n=3blocks
m=2frames
k=406channel bits=14(Frame Sync)+392(Information)

FIG. 13

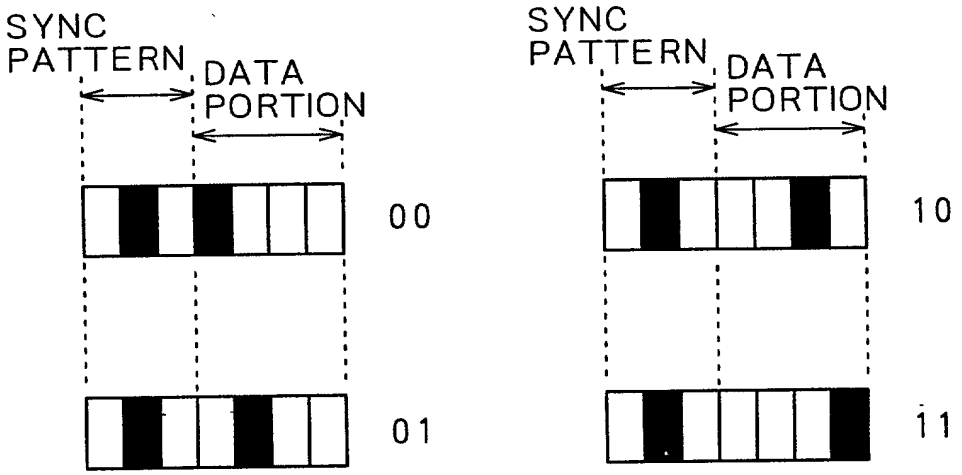

SYNC PATTERN
DATA PORTION
00
01
SYNC PATTERN
DATA PORTION
10
11

FIG. 14A

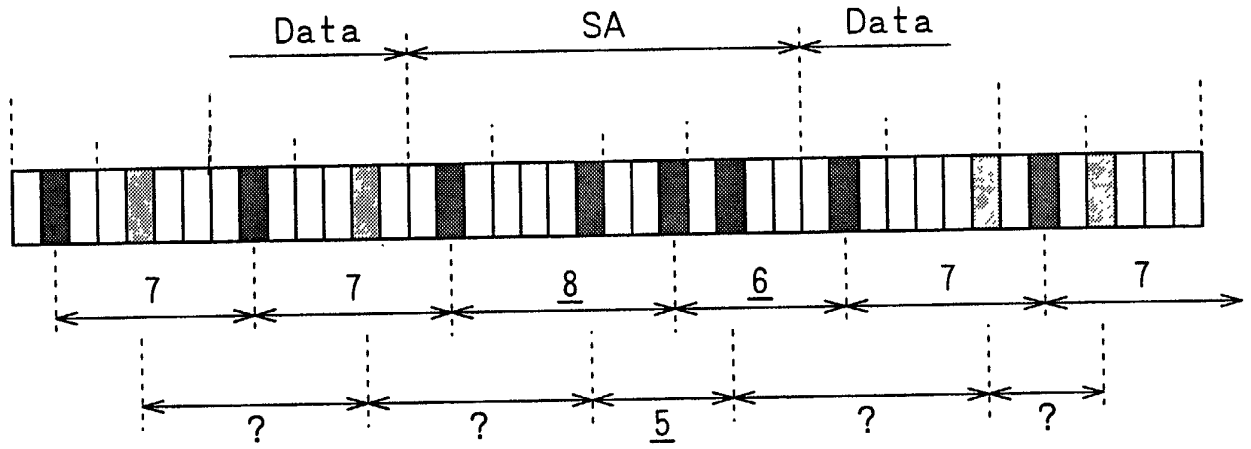


FIG. 14B

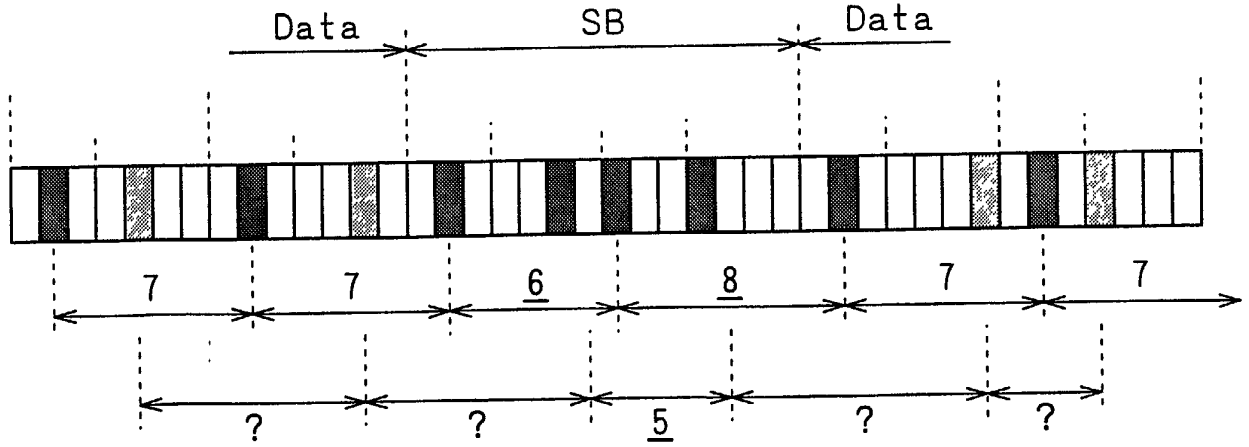


FIG. 15

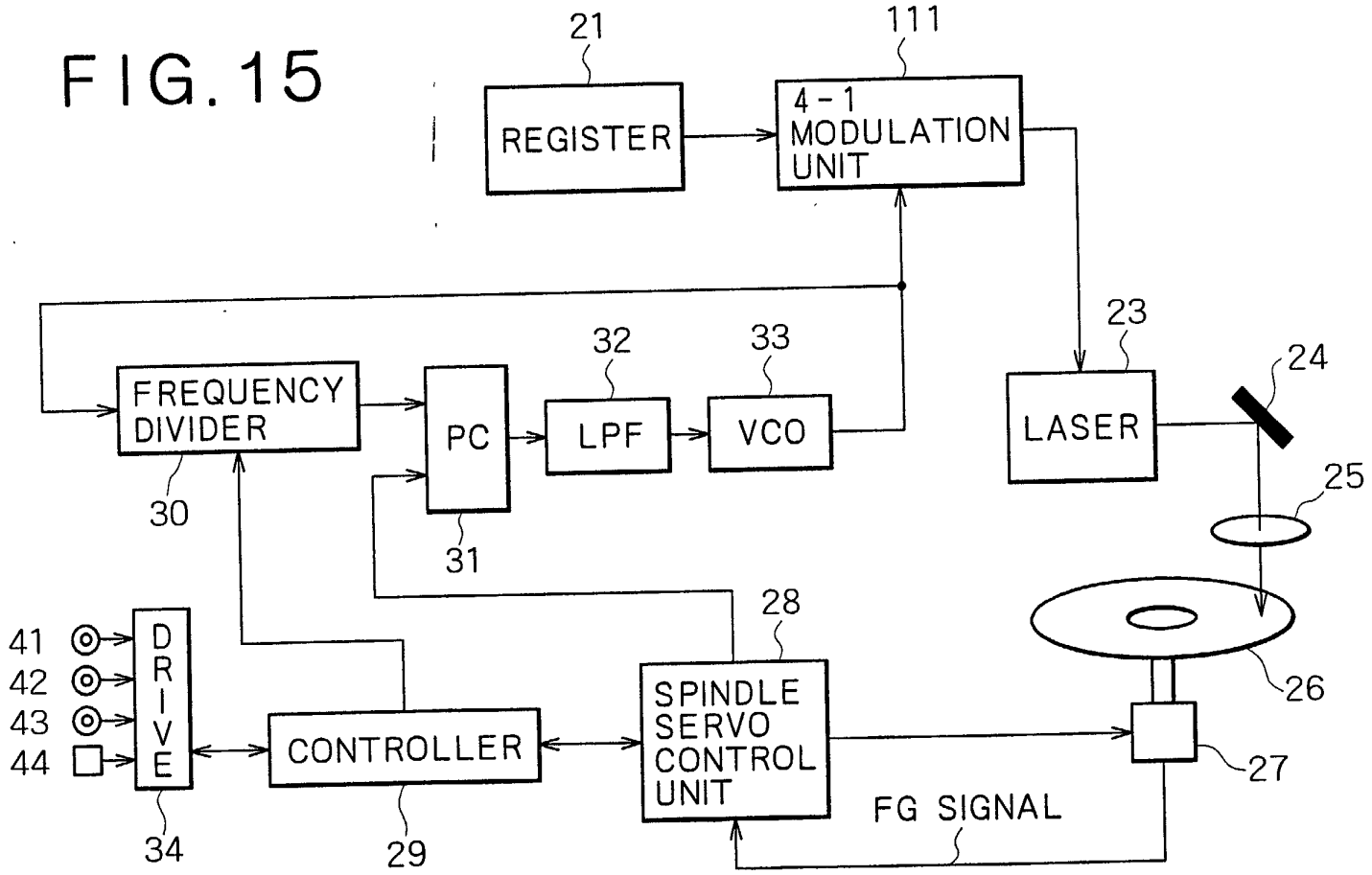

21
111
REGISTER
4-1
MODULATION
UNIT
23
24
32
33
FREQUENCY
DIVIDER
PC
LPF
VCO
LASER
25
30
31
28
41
42
43
44
DRIVE
CONTROLLER
SPINDLE
SERVO
CONTROL
UNIT
26
27
FG SIGNAL
34
29

FIG. 16A

FIG. 16B

FIG. 16C

FIG. 16D

FIG. 16E

FIG. 16F

FIG. 16G

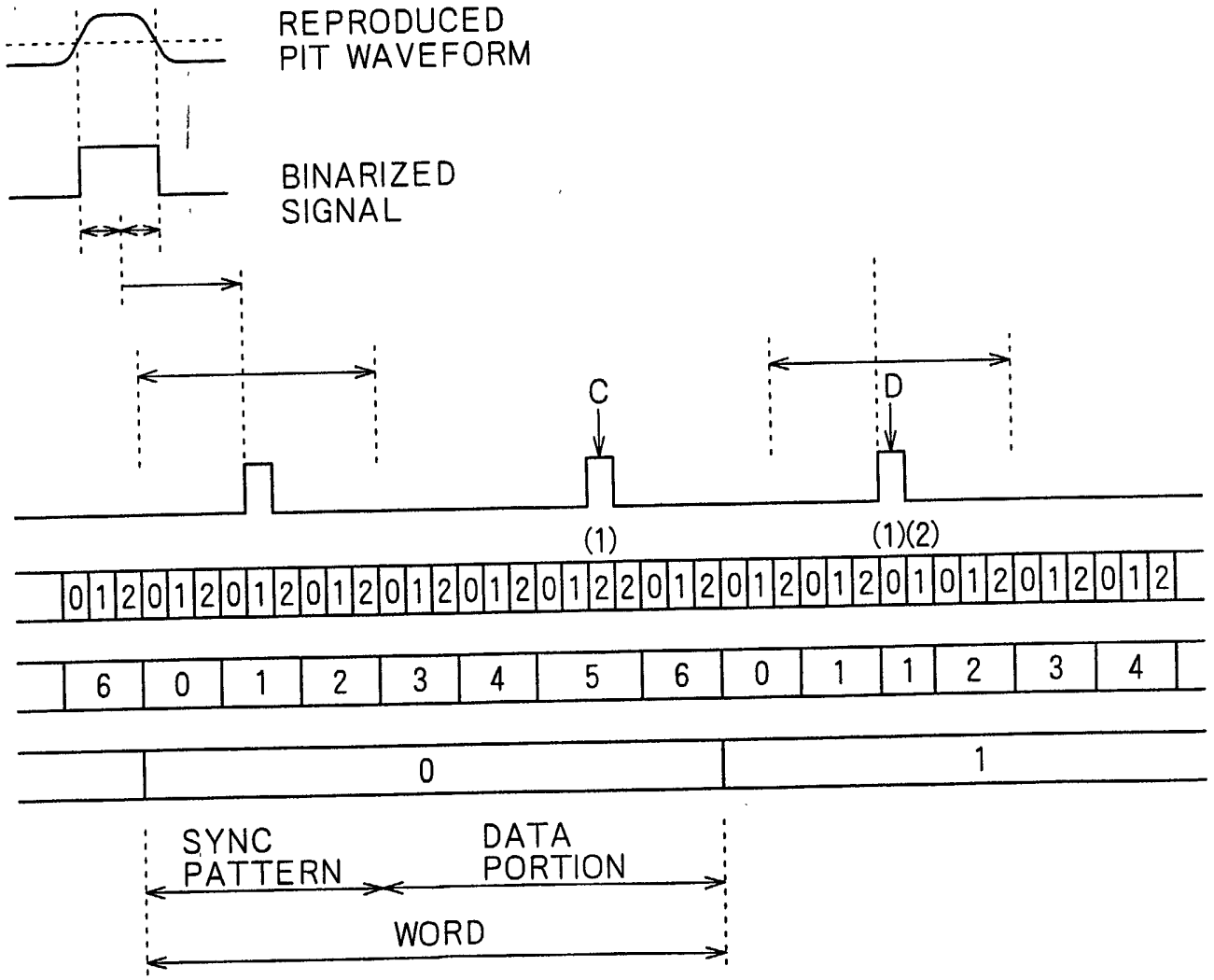


FIG. 17

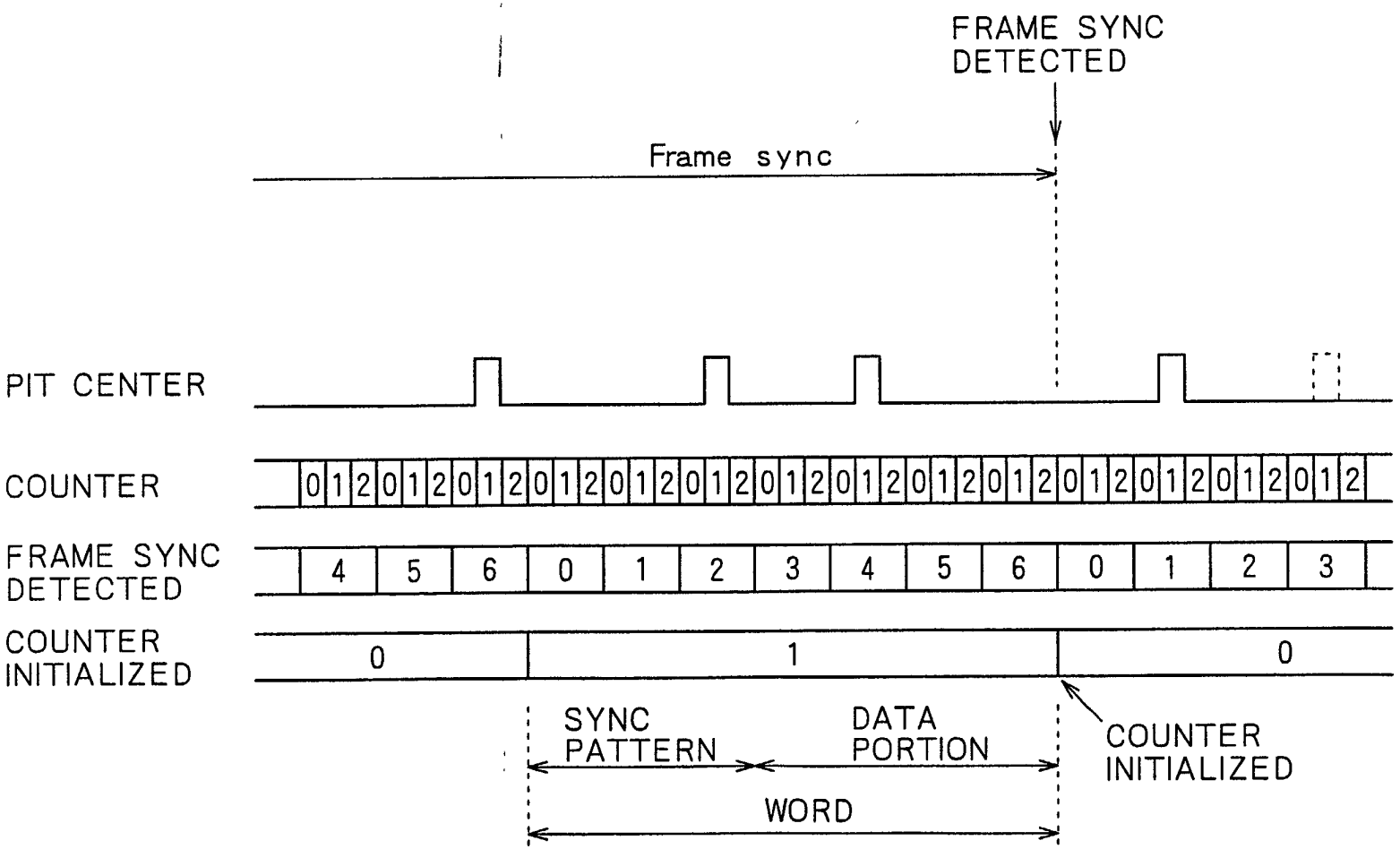
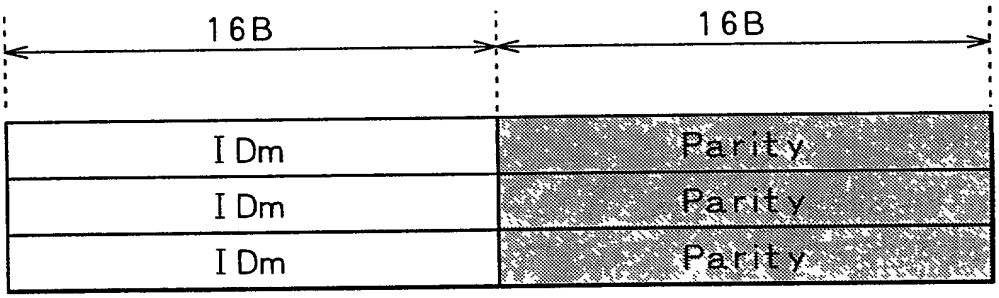

FRAME SYNC DETECTED
Frame sync
PIT CENTER
COUNTER
0 1 2 0 1 2 0 1 2 0 1 2 0 1 2 0 1 2 0 1 2 0 1 2 0 1 2 0 1 2 0 1 2 0 1 2 0 1 2 0 1 2
FRAME SYNC DETECTED
4 5 6 0 1 2 3 4 5 6 0 1 2 3
COUNTER INITIALIZED
0
1
0
SYNC PATTERN
DATA PORTION
COUNTER INITIALIZED
WORD

FIG.18



GF(2^8)
RS(32, 16, 17)×3

FIG. 19A

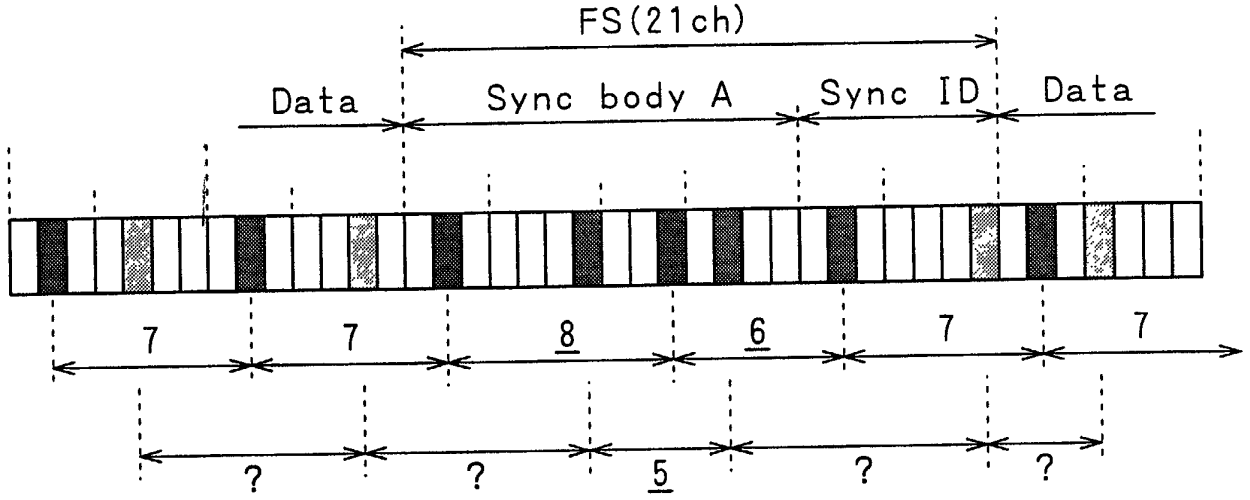


FIG. 19B

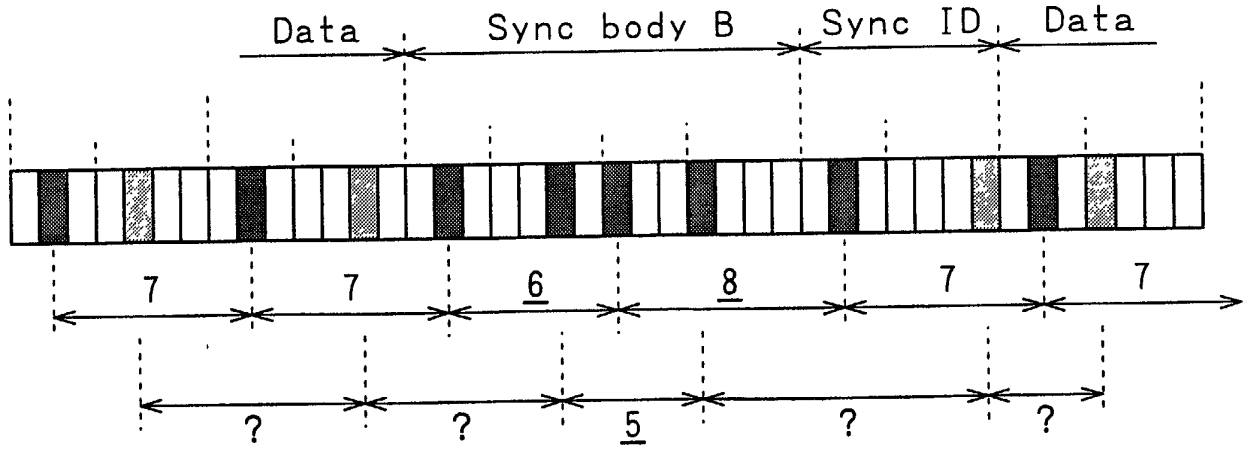
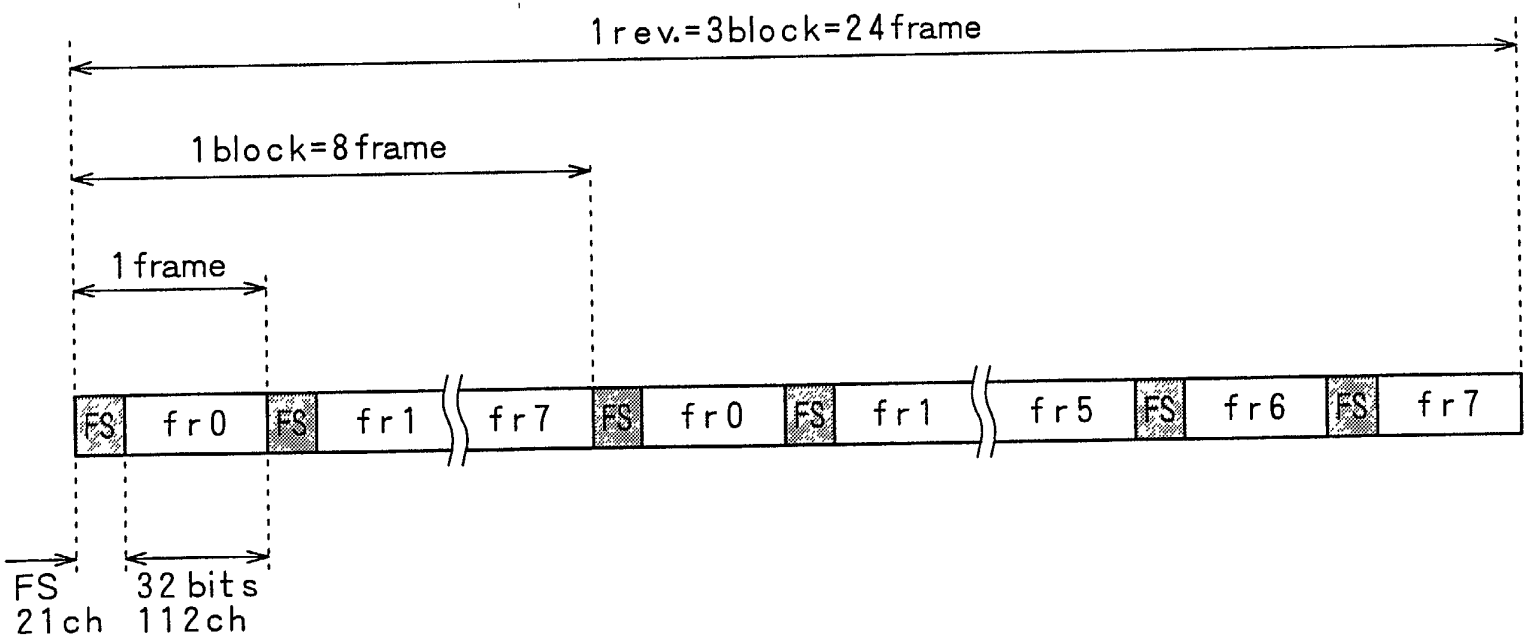


FIG. 20



n=3blocks
m=8frames
k=133channel bits=21(Frame Sync)+112(Information)